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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

*Attorney Docket. No. 041082-0113*

Applicant: Aser ROTHSTEIN *et al.*

Title: SELF-ALIGNING PEPTIDES MODELED ON HUMAN  
ELASTIN AND OTHER FIBROUS PROTEINS

Application No.: 09/964,662

Filing Date: 09/28/2001

Examiner: Unassigned

Art Unit: Unassigned

**STATEMENT TO SUPPORT FILING AND SUBMISSION  
IN ACCORDANCE WITH 37 C.F.R. 1.821-1.825**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

In connection with a Sequence Listing submitted concurrently herewith, the  
undersigned Hereby states that:

1. the submission, filed herewith in accordance with 37 C.F.R. 1.821(g), does not include new matter;
2. the content of the attached paper copy and the attached computer readable copy of the Sequence Listing, submitted in accordance with 37 C.F.R. 1.821(c) and (3), respectively, are the same; and
3. all statements made herein of their own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United

States Code and that such willful false statements may jeopardize the validity of the application or any patent resulting therefrom.

Respectfully submitted,

Date 17 December 2001

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## SEQUENCE LISTING



#3

<110> ROTHSTEIN, ASER  
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      ROTHSTEIN, STEVEN

<120> SELF-ALIGNING PEPTIDES MODELED ON HUMAN ELASTIN  
      AND OTHER FIBROUS PROTEINS

<130> 041082/0110

<140> 09/340,736  
<141> 1999-06-29

<150> 08/911,364  
<151> 1997-08-07

<150> 60/023,552  
<151> 1996-08-07

<160> 11

<170> PatentIn Ver. 2.1

<210> 1  
<211> 731  
<212> PRT  
<213> Homo sapiens

<400> 1  
Gly Gly Val Pro Gly Ala Ile Pro Gly Gly Val Pro Gly Gly Val Phe  
1                  5                 10                 15

Tyr Pro Gly Ala Gly Leu Gly Ala Leu Gly Gly Gly Ala Leu Gly Pro  
20                 25                 30

Gly Gly Lys Pro Leu Lys Pro Val Pro Gly Gly Leu Ala Gly Ala Gly  
35                 40                 45

Leu Gly Ala Gly Leu Gly Ala Phe Pro Ala Val Thr Phe Pro Gly Ala  
50                 55                 60

Leu Val Pro Gly Gly Val Ala Asp Ala Ala Ala Tyr Lys Ala Ala  
65                 70                 75                 80

Lys Ala Gly Ala Gly Leu Gly Gly Val Pro Gly Val Gly Gly Leu Gly  
85                 90                 95

Val Ser Ala Gly Ala Val Val Pro Gln Pro Gly Ala Gly Val Lys Pro  
100                105                 110

Gly Lys Val Pro Gly Val Gly Leu Pro Gly Val Tyr Pro Gly Gly Val  
115                120                 125

Leu Pro Gly Ala Arg Phe Pro Gly Val Gly Val Leu Pro Gly Val Pro  
130                135                 140

Thr Gly Ala Gly Val Lys Pro Lys Ala Pro Gly Val Gly Gly Ala Phe  
 145 150 155 160  
 Ala Gly Ile Pro Gly Val Gly Pro Phe Gly Gly Pro Gln Pro Gly Val  
 165 170 175  
 Pro Leu Gly Tyr Pro Ile Lys Ala Pro Lys Leu Pro Gly Gly Tyr Gly  
 180 185 190  
 Leu Pro Tyr Thr Thr Gly Lys Leu Pro Tyr Gly Tyr Gly Pro Gly Gly  
 195 200 205  
 Val Ala Gly Ala Ala Gly Lys Ala Gly Tyr Pro Thr Gly Thr Gly Val  
 210 215 220  
 Gly Pro Gln Ala Ala Ala Ala Ala Ala Lys Ala Ala Ala Lys Phe  
 225 230 235 240  
 Gly Ala Gly Ala Ala Gly Val Leu Pro Gly Val Gly Gly Ala Gly Val  
 245 250 255  
 Pro Gly Val Pro Gly Ala Ile Pro Gly Ile Gly Gly Ile Ala Gly Val  
 260 265 270  
 Gly Thr Pro Ala Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala  
 275 280 285  
 Lys Tyr Gly Ala Ala Ala Gly Leu Val Pro Gly Gly Pro Gly Phe Gly  
 290 295 300  
 Pro Gly Val Val Gly Val Pro Gly Ala Gly Val Pro Gly Val Gly Val  
 305 310 315 320  
 Pro Gly Ala Gly Ile Pro Val Val Pro Gly Ala Gly Ile Pro Gly Ala  
 325 330 335  
 Ala Val Pro Gly Val Val Ser Pro Glu Ala Ala Ala Lys Ala Ala Ala  
 340 345 350  
 Lys Ala Ala Lys Tyr Gly Ala Arg Pro Gly Val Gly Val Gly Gly Ile  
 355 360 365  
 Pro Thr Tyr Gly Val Gly Ala Gly Gly Phe Pro Gly Phe Gly Val Gly  
 370 375 380  
 Val Gly Gly Ile Pro Gly Val Ala Gly Val Pro Gly Val Gly Gly Val  
 385 390 395 400  
 Pro Gly Val Gly Gly Val Pro Gly Val Gly Ile Ser Pro Glu Ala Gln  
 405 410 415  
 Ala Ala Ala Ala Lys Ala Ala Lys Tyr Gly Val Gly Thr Pro Ala  
 420 425 430  
 Ala Ala Ala Ala Lys Ala Ala Lys Ala Ala Gln Phe Gly Leu Val  
 435 440 445

Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly  
450 455 460

Val Ala Pro Gly Val Gly Leu Ala Pro Gly Val Gly Val Ala Pro Gly  
465 470 475 480

Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Ala Ile Gly Pro Gly  
485 490 495

Gly Val Ala Ala Ala Lys Ser Ala Ala Lys Val Ala Ala Lys Ala  
500 505 510

Gln Leu Arg Ala Ala Ala Gly Leu Gly Ala Gly Ile Pro Gly Leu Gly  
515 520 525

Val Gly Val Gly Val Pro Gly Leu Gly Val Gly Ala Gly Val Pro Gly  
530 535 540

Leu Gly Val Gly Ala Gly Val Pro Gly Phe Gly Ala Gly Ala Asp Glu  
545 550 555 560

Gly Val Arg Arg Ser Leu Ser Pro Glu Leu Arg Glu Gly Asp Pro Ser  
565 570 575

Ser Ser Gln His Leu Pro Ser Thr Pro Ser Ser Pro Arg Val Pro Gly  
580 585 590

Ala Leu Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala Val Pro Gly  
595 600 605

Val Leu Gly Gly Leu Gly Ala Leu Gly Gly Val Gly Ile Pro Gly Gly  
610 615 620

Val Val Gly Ala Gly Pro Ala Ala Ala Ala Ala Ala Lys Ala Ala  
625 630 635 640

Ala Lys Ala Ala Gln Phe Gly Leu Val Gly Ala Ala Gly Leu Gly Gly  
645 650 655

Leu Gly Val Gly Gly Leu Gly Val Pro Gly Val Gly Gly Leu Gly Gly  
660 665 670

Ile Pro Pro Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala Gly  
675 680 685

Leu Gly Gly Val Leu Gly Gly Ala Gly Gln Phe Pro Leu Gly Gly Val  
690 695 700

Ala Ala Arg Pro Gly Phe Gly Leu Ser Pro Ile Phe Pro Gly Gly Ala  
705 710 715 720

Cys Leu Gly Lys Ala Cys Gly Arg Lys Arg Lys  
725 730

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<211> 200

<212> PRT  
<213> Artificial Sequence

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&lt;400&gt; 2

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1 5 10 15

Val Pro Gly Val Gly Gly Val Pro Gly Val Gly Gly Val Pro Gly Val  
20 25 30

Gly Ile Ser Pro Glu Ala Gln Ala Ala Ala Ala Lys Ala Ala Lys  
35 40 45

Tyr Gly Val Gly Thr Pro Ala Ala Ala Ala Lys Ala Ala Ala Lys  
50 55 60

Ala Ala Gln Phe Gly Leu Val Pro Gly Val Gly Val Ala Pro Gly Val  
65 70 75 80

Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Leu Ala Pro  
85 90 95

Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Val  
100 105 110

Ala Pro Ala Ile Gly Pro Glu Ala Gln Ala Ala Ala Ala Lys Ala  
115 120 125

Ala Lys Tyr Gly Val Gly Thr Pro Ala Ala Ala Ala Lys Ala Ala  
130 135 140

Ala Lys Ala Ala Gln Phe Gly Leu Val Pro Gly Val Gly Val Ala Pro  
145 150 155 160

Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Leu  
165 170 175

Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val  
180 185 190

Gly Val Ala Pro Ala Ile Gly Pro  
195 200

&lt;210&gt; 3

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic peptide

<400> 3  
Lys Ala Ala Lys  
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<210> 4  
<211> 5  
<212> PRT  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: Synthetic peptide  
  
<400> 4  
Lys Ala Ala Ala Lys  
1 5

<210> 5  
<211> 6  
<212> PRT  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: Synthetic peptide  
  
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Pro Gly Val Gly Val Ala  
1 5

<210> 6  
<211> 5  
<212> PRT  
<213> Artificial Sequence  
  
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<223> Description of Artificial Sequence: Synthetic peptide  
  
<400> 6  
Val Pro Gly Val Gly  
1 5

<210> 7  
<211> 4  
<212> PRT  
<213> Artificial Sequence  
  
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<400> 7  
Val Pro Gly Gly  
1

<210> 8  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 8  
Gly Gly Leu Gly Tyr Gly Gly Leu Gly Tyr Gly Gly Leu Gly Tyr Gly  
1 5 10 15

Gly Leu Gly Tyr Gly Gly Leu Gly Tyr Gly Gly Leu Gly Tyr  
20 25 30

<210> 9  
<211> 117  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
MFU-3 polypeptide

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1 5 10 15

Pro Gly Val Gly Gly Val Pro Gly Val Gly Gly Val Pro Gly Val Gly  
20 25 30

Ile Ser Pro Glu Ala Gln Ala Ala Ala Ala Lys Ala Ala Lys Tyr  
35 40 45

Gly Val Gly Thr Pro Ala Ala Ala Ala Lys Ala Ala Lys Ala  
50 55 60

Ala Gln Phe Gly Leu Val Pro Gly Val Gly Val Ala Pro Gly Val Gly  
65 70 75 80

Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Leu Ala Pro Gly  
85 90 95

Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala  
100 105 110

Pro Ala Ile Gly Pro  
115

<210> 10  
<211> 118  
<212> PRT  
<213> Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
MFU-4 polypeptide

&lt;400&gt; 10

Phe Pro Gly Phe Gly Val Gly Val Gly Ile Pro Gly Val Ala Gly  
1 5 10 15Val Pro Gly Val Gly Gly Val Pro Gly Val Gly Gly Val Pro Gly Val  
20 25 30Gly Ile Ser Pro Glu Ala Gln Ala Ala Ala Ala Lys Ala Ala Lys  
35 40 45Tyr Gly Val Gly Thr Pro Ala Ala Ala Ala Lys Ala Ala Ala Lys  
50 55 60Ala Ala Gln Phe Gly Leu Val Pro Gly Val Gly Val Ala Pro Gly Val  
65 70 75 80Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Leu Ala Pro  
85 90 95Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Val  
100 105 110Ala Pro Ala Ile Gly Pro  
115

&lt;210&gt; 11

&lt;211&gt; 199

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
MFU-5 polypeptide

&lt;400&gt; 11

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1 5 10 15Pro Gly Val Gly Gly Val Pro Gly Val Gly Gly Val Pro Gly Val Gly  
20 25 30Ile Ser Pro Glu Ala Gln Ala Ala Ala Ala Lys Ala Ala Lys Tyr  
35 40 45Gly Val Gly Thr Pro Ala Ala Ala Ala Lys Ala Ala Ala Lys Ala  
50 55 60Ala Gln Phe Gly Leu Val Pro Gly Val Gly Val Ala Pro Gly Val Gly  
65 70 75 80Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Leu Ala Pro Gly  
85 90 95

Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala  
100 105 110

Pro Ala Ile Gly Pro Glu Ala Gln Ala Ala Ala Ala Lys Ala Ala  
115 120 125

Lys Tyr Gly Val Gly Thr Pro Ala Ala Ala Ala Lys Ala Ala Ala  
130 135 140

Lys Ala Ala Gln Phe Gly Leu Val Pro Gly Val Gly Val Ala Pro Gly  
145 150 155 160

Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Leu Ala  
165 170 175

Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly  
180 185 190

Val Ala Pro Ala Ile Gly Pro  
195